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09/812,429	03/20/2001	Laurent Herrmann	PHFR 000087	9844

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EXAMINER
HO, CHUONG T

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/812,429	HERRMANN ET AL.,
	Examiner	Art Unit	
	CHUONG T. HO	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 February 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-2,4,6-7,9-10,15- 17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2,4,6-7,9-10 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Amendment filed 02/09/07 have been entered and made of record.

2.   Applicant's arguments with respect to claims 1-2, 4, 6-7, 9, 10, 15-17 have been

considered but are moot in view of the new ground(s) of rejection.

3.   Claims 1-2, 4, 6-7, 9, 10, 15-17 are pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine,
manufacture, or composition of matter, or any new and useful improvement
thereof, may obtain a patent therefor, subject to the conditions and requirements
of this title.

4.   Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claim 10 is considered to be Functional Descriptive Material: "Data structures"

representing descriptive Material per se or computer programs representing computer

listing per se

Data structure not claimed as embodied in computer-readable media are

descriptive material per se and are not statutory because they are not capable of

causing functional change in the computer.

In the claim 10, "A computer program" should be changed to - - a computer-

readable medium encoded with a computer program, a computer program executed by

a computer - -.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

2.   Claims 1, 6, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bertram et al. (U.S.Patent No. 6,996,098) in view of Ramaswamy et al. (6,888,840)

and in further view of Ito et al. (U.S.Patent No. 6,377,309 B1).

Regarding to claim 1, Bertram et al. discloses a first unit for generating an

intermediate transport stream by creating available bandwidth in input transport stream,

the available bandwidth is created by inserting at least one null packets into the input

transport stream (col. 2, lines 20-23, a NULL packet inserter, for inserting NULL

transport packets within a transport stream including content packets; and a transport

processor, for replacing at least some of the NULL packets with asset packets to

produce a transport stream including content packets and asset packets) (figure 2A, 2B,

col. 3, lines 63-65, the null packet inserter 135-NP intersperse NULL packets with the

content packets within the content transport stream TC. The number of NULL packets

interspersed with the content data packet interspersed with the content data packets

"reserve" a portion of the content data stream sufficient to, ideally, accommodate all of

the asset data packets. That is, the amount of bandwidth to be reserved by

interspersing NULL packets is indicated to the NULL packet inserter 135-NP via the

control signal RESERVED BANDWIDTH. The number of NULL packets by be

predetermined or calculated); a second unit for inserting said data in the available

bandwidth of said intermediate stream in order to generate said output transport stream

(col. 2, lines 20-23, a NULL packet inserter, for inserting NULL transport packets within

a transport stream including content packets; and a transport processor, for replacing at

least some of the NULL packets with asset packets to produce a transport stream

including content packets and asset packets).

However, Bertram et al. are silent to disclosing inserting at least one null packet

into the input transport stream such that said intermediate transport stream has a higher

bit rate than said input transport stream.

Ramaswamy et al. discloses inserting at least one null packet into the input

transport stream such that said intermediate transport stream (output packet stream)

has a higher bit rate than said input transport stream (input transport packet stream)

(figure 2a, col. 4, lines 25-26, when the bit rate of the output packet stream is greater

than that of the input transport packet stream, additional packets are inserted into the

output packet stream to generate the desired bit rate) (col. 4, line 55, a null packet is

inserted into the output packet stream as the additional packet).

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to incorporate inserting at least one null packet into the input transport

stream such that said intermediate transport stream has a higher bit rate than said input

transport stream taught by Ramaswamy into the system of Bertram. One would have

been motivated to do so to other assets such that the other assets may be injected into

a subsequent content stream.

However, the combined system (Bertram – Ramaswamy) is silent to disclosing

for inserting of second type in the available bandwidth of intermediate transport stream,

thereby generating output transport stream.

See figures 21, 27, 30, Ito et al. discloses MPEG2 transport stream structure, i.e.,

the transmission format of an MPEG2 datastream. A method of multiplexing an MPEG4

datastream in an MPEG2 datastream (see col. 16, lines 60-67); comprising:

- A server intended for generating, from an input transport stream of a first type

   (MPEG2) and from data of a second type (MPEG 4), and output transport stream

   of first type (MPEG2) which notably carries data of second type (MPEG4), server

   having:

- For inserting data of second type (MPEG4) the available bandwidth of

   intermediate transport stream, thereby generating output transport stream

   (MPEG2) (see figure 21, figure 27, figure 30, col. 17, lines 5-32).

Both Bertram, Ramaswamy, and Ito discloses MPEG-2 transport streams. Ito

recognizes for inserting of second type (MPEG-4) the available bandwidth of

intermediate transport stream, thereby generating output transport stream. Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

modify the combined system (Bertram – Ramaswamy) with the teaching of Ito to insert

of second type (MPEG-4) the available bandwidth of intermediate transport stream,

thereby generating output transport stream in order to improve the current digital TV

broadcast system.

3.   Regarding to claim 6, Bertram et al. discloses a first unit for generating an

intermediate transport stream by creating available bandwidth in input transport stream,

the available bandwidth is created by inserting at least one null packets into the input

transport stream (col. 2, lines 20-23, a NULL packet inserter, for inserting NULL

transport packets within a transport stream including content packets; and a transport

processor, for replacing at least some of the NULL packets with asset packets to

produce a transport stream including content packets and asset packets) (figure 2A, 2B,

col. 3, lines 63-65, the null packet inserter 135-NP intersperse NULL packets with the

content packets within the content transport stream TC. The number of NULL packets

interspersed with the content data packet interspersed with the content data packets

"reserve" a portion of the content data stream sufficient to, ideally, accommodate all of

the asset data packets. That is, the amount of bandwidth to be reserved by

interspersing NULL packets is indicated to the NULL packet inserter 135-NP via the

control signal RESERVED BANDWIDTH. The number of NULL packets by be

predetermined or calculated); a second unit for inserting said data in the available

bandwidth of said intermediate stream in order to generate said output transport stream

(col. 2, lines 20-23, a NULL packet inserter, for inserting NULL transport packets within

a transport stream including content packets; and a transport processor, for replacing at

least some of the NULL packets with asset packets to produce a transport stream

including content packets and asset packets).

However, Bertram et al. are silent to disclosing inserting at least one null packet into the input transport stream such that said intermediate transport stream has a higher bit rate than said input transport stream.

Ramaswamy et al. discloses inserting at least one null packet into the input transport stream such that said intermediate transport stream (output packet stream) has a higher bit rate than said input transport stream (input transport packet stream) (figure 2a, col. 4, lines 25-26, when the bit rate of the output packet stream is greater than that of the input transport packet stream, additional packets are inserted into the output packet stream to generate the desired bit rate) (col. 4, line 55, a null packet is inserted into the output packet stream as the additional packet).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate inserting at least one null packet into the input transport stream such that said intermediate transport stream has a higher bit rate than said input transport stream taught by Ramaswamy into the system of Bertram. One would have been motivated to do so to other assets such that the other assets may be injected into a subsequent content stream.

However, the combined system (Bertram – Ramaswamy) is silent to disclosing for inserting of second type in the available bandwidth of intermediate transport stream, thereby generating output transport stream.

See figures 21, 27, 30, Ito et al. discloses MPEG2 transport stream structure, i.e., the transmission format of an MPEG2 datastream. A method of multiplexing an MPEG4 datastream in an MPEG2 datastream (see col. 16, lines 60-67); comprising:

- A server intended for generating, from an input transport stream of a first type
  (MPEG2) and from data of a second type (MPEG 4), and output transport stream
  of first type (MPEG2) which notably carries data of second type (MPEG4), server
  having:

- For inserting data of second type (MPEG4) the available bandwidth of
  intermediate transport stream, thereby generating output transport stream
  (MPEG2) (see figure 21, figure 27, figure 30, col. 17, lines 5-32).

Both Bertram, Ramaswamy, and Ito discloses MPEG-2 transport streams. Ito

recognizes for inserting of second type (MPEG-4) the available bandwidth of

intermediate transport stream, thereby generating output transport stream. Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

modify the combined system (Bertram – Ramaswamy) with the teaching of Ito to insert

of second type (MPEG-4) the available bandwidth of intermediate transport stream,

thereby generating output transport stream in order to improve the current digital TV

broadcast system.

4.   As to claims 15, 16, Ito discloses the server is a part of a broadcasting system

that further comprises a client terminal for receiving the output transport stream

delivered by the server and for retrieving the data carried in this transport stream (col.

18, lines 46-47 broadcasting) (col. 17, lines 30-31, MPEG2/MPEG4 multiplexed

datastream).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

6.   Claims 2, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

combined system (Bertram – Raaswamy – Ito) in view of Knutson (6,788,710).

In the claims 2, 7, the combined system (Bertram – Raaswamy – Ito) discloses

the limitations of claim 1 above.

However, the combined system (Bertram – Raaswamy – Ito) are silent to

disclosing wherein input transport stream carries control information, and server has

third means, upstream of second means, for updating control information.

Kutson et al. discloses wherein input transport stream carries control information,

and server has third means, upstream of second means, for updating control

information (program association table, program map table) to take data of second type

into account (see col. 7, lines 30-35).

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to incorporate wherein input transport stream carries control information,

and server has third means, upstream of second means, for updating control

information taught by Kutson into the combined system (Bertram – Raaswamy – Ito).

One would have motivated to do so to allow to insert auxiliary data into a digital data stream without affecting the existing transport data stream.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims, 4, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram et al. (U.S.Patent No. 6,996,098) in view of Ramaswamy et al. (6,888,840) in further view Rosengren (6,741,617).

As to claims, 4, 9, Bertram et al. discloses a first unit for generating an intermediate transport stream by creating available bandwidth in said input transport stream, a second unit for inserting said data of said second type in the available bandwidth of said intermediate transport stream in order to generate said output transport stream (col. 2, lines 20-23, a NULL packet inserter, for inserting NULL transport packets within a transport stream including content packets; and a transport processor, for replacing at least some of the NULL packets with asset packets to produce a transport stream including content packets and asset packets) (figure 2A, 2B, col. 3, lines 63-65, the null packet inserter 135-NP intersperse NULL packets with the

content packets within the content transport stream TC. The number of NULL packets

interspersed with the content data packet interspersed with the content data packets

"reserve" a portion of the content data stream sufficient to, ideally, accommodate all of

the asset data packets. That is, the amount of bandwidth to be reserved by

interspersing NULL packets is indicated to the NULL packet inserter 135-NP via the

control signal RESERVED BANDWIDTH. The number of NULL packets by be

predetermined or calculated); a second unit for inserting said data in the available

bandwidth of said intermediate stream in order to generate said output transport stream

(col. 2, lines 20-23, a NULL packet inserter, for inserting NULL transport packets within

a transport stream including content packets; and a transport processor, for replacing at

least some of the NULL packets with asset packets to produce a transport stream

including content packets and asset packets).

However, Bertram is silent to disclosing inserting null packet so that the generated

intermediate transport stream has a bit rate that is smaller or equal to the bit rate of said

input transport stream.

Ramaswamy et al. disccloses inserting null packet so that the generated

intermediate transport stream has a bit rate that is smaller or equal to the bit rate of said

input transport stream (col. 4, lines 58-59, the bit rates of the input transport packet

stream and the auxiliary data packet stream be less that or equal to the bit rate of the

output packet stream) (a null packet is inserted into the output packet stream as the

additional packet)

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate inserting null packet so that the generated intermediate transport stream has a bit rate that is smaller or equal to the bit rate of said input transport stream taught by Ramaswamy into the system of Bertram. One would have been motivated to do so to other assets such that the other assets may be injected into a subsequent content stream.

However, the combined system (Bertram – Ramaswamy) are silent to disclosing selecting at least one elementary stream in said input transport stream, demultiplexing the at least one elementary stream, transcoding encoded data contained in the at least one elementary stream; and remultiplexing said transcoding data.

Rosengren et al. discloses selecting at least one elementary stream in said input transport stream, demultiplexing the at least one elementary stream, transcoding encoded data contained in the at least one elementary stream; and remultiplexing said transcoding data (figure 5, col. 4, lines 35-67).

Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate selecting at least one elementary stream in said input transport stream, demultiplexing the at least one elementary stream, transcoding encoded data contained in the at least one elementary stream; and remultiplexing said transcoding data taught by Rosengren into the combined system (Bertram – Ramaswamy). One would have been motivated to do so to allow a program to comprise more than one elementary video stream.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

combined system (Bertram – Ramaswamy – Rosengren) in view of Knutson

(6,788,710).

As to claim 17, the combined system (Bertram – Ramaswamy – Rosengren) discloses

the limitations of claim 9 above.

However, the combined system (Bertram – Ramaswamy – Rosengren) are silent to

disclosing wherein the input transport stream carries control information, the system

further comprising updating the control information to take the data of said second type

into account.

Kutson et al. discloses wherein input transport stream carries control information,

and server has third means, upstream of second means, for updating control

information (program association table, program map table) to take data of second type

into account (see col. 7, lines 30-35).

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to incorporate wherein input transport stream carries control information,

and server has third means, upstream of second means, for updating control

information taught by Kutson into the combined system(Bertram – Ramaswamy –

Rosengren). One would have motivated to do so to allow to insert auxiliary data into a digital data stream without affecting the existing transport data stream.

11.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wu et al. (7,016,337); Zhang et al. (6,611,624).

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

04/24/07

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